DOCUMENT RESUME

ED 369 921 CE 066 334

AUTHOR Mwangi, John G.; McCaslin, N. L.
TITLE Factors Related to the Motivation of Extension Agents in Kenya's Rift Valley Province. Summary of Research 76.
INSTITUTION Ohio State Univ., Columbus. Dept. of Agricultural Education.
PUB DATE 94
NOTE 13p.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adult Education; *Extension Agents; Extension Education; Foreign Countries; *Job Satisfaction; *Motivation; Quality of Working Life
IDENTIFIERS *Kenya

ABSTRACT

Job satisfaction factors related to motivation of a random sample of 325 agents in Kenya's extension service in the Rift Valley Province were identified. Data were collected using a group-administered, closed-ended, forced-choice questionnaire with 105 job satisfaction, 10 motivational, and 10 personal characteristics items between January and March 1993. Agents were also interviewed as a group in each district. Findings indicated personal characteristics were not as important for agents' motivation as were the job satisfaction factors. Eight job satisfaction factors were important for agents' job satisfaction. In decreasing order of importance, they were as follows: evaluation, dependable supervisors, work incentives, pay, praise and work location, housing and transportation, job security, and administration and supervision. Five of the eight job satisfaction factors were important for agents' motivation. In decreasing order of importance, they were as follows: dependable supervisors, pay, job security, evaluation, and administration and supervision. One cause of agents' frustration and low job motivation was their perception that merit was being ignored in selecting candidates for inservice staff training. Job satisfaction and motivation were related but different. Recommendations for extension managers and suggestions for future research were made. (Contains 38 references.) (YLB)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.



# Summary of Research

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Department of Agricultural Education
The Ohio State University, Columbus, Ohio 43210-1067

ED 369 921

## Factors Related to the Motivation of Extension Agents in Kenya's Rift Valley Province

John G. Mwangi and N. L. McCaslin

Many scholars believe that motivation is mainly responsible for differential staff performance, that it changes as time and conditions change, is dependent on incentives that the staff value and believed to be attainable with increased individual performance, and that it is high when staff frustration is minimal (Moris, 1987; Grossnickle & Thiel, 1988; Beder, 1990; Cohen, 1990; Schmincke, 1990; Winslow, 1990; Watanabe, 1991). Managers need to know what motivation is and how they can use it to obtain the desired work performance from their subordinates (Kreitner, 1989). Lawler III (1973) indicated that if little ability is required and people have the same ability, skills, and training, positive staff motivation is the single most important determinant of effective job performance. Besides being more productive, motivated workers equal or excel any standards set by their superiors (Dowling & Sayles, 1971).

Motivation is the psychological process that gives purpose, direction, and intensity to behavior (Kreitner, 1989). In this study, motivation is assumed to be the reason individuals desire to excel in their work.

Maslow (1943) suggested that people are motivated by five categories of needs. Starting from the most basic and first to be satisfied, these needs are physiological or survival needs, safety needs, social or love needs, self-esteem or ego needs, and self-actualization needs. Maslow indicated that higher-level needs emerge after lower-level needs are satisfied and that although a person can have several needs at once, only one need can dominate at any one time. A satisfied need loses its motivational appeal but, if threatened later, it regains potency and remains dominant until it is satisfied. Maslow advised managers to provide different rewards and counselling to motivate different workers. He indicated that a fulfilled need does not motivate, but other researchers (Glassman, 1978; Heneman et al., 1980; Buford & Bedeian, 1988; Kreitner, 1989; Davies et al., 1990) have shown that satisfying self-actualization needs increases motivation.

Unlike Maslow, Herzberg (1959 & 1972) stressed the need for a favorable work environment saying that enriched jobs rather than pay, supervision, and other environmental factors were the key to motivation and job satisfaction. Herzberg believed that challenging, enriched jobs motivated employees more than dull, routine jobs. He advised managers to redesign jobs to provide opportunities for individual achievement, recognition, responsibility, advancement and personal growth. However, research (Buford & Bedeian, 1988; Kreitner, 1989) has shown that professional employees have different work preferences for which Herzberg did not account.

An individual directs personal behavior toward pleasurable and away from undesirable outcomes (Vroom, 1964). Vroom suggested that motivation was determined by perceived probabilities of success, and increases as an individual's perceived effort-performance and performance-reward probability increases. If employees believe their actions would lead to rewards that they value and have a good chance of getting them, they will work harder. To be effective, he suggested, all

CE 066 334

rewards must be linked to performance, goals must be reasonable, and the outcomes must be negotiated. He advised managers to identify, support and reinforce individual perception by linking appraisal to professional and personal development.

Adams and Rosenbaum (1962) indicated that treating employees inequitably lowers their motivation and performance. They advised managers to make inputs required for outcomes as explicit as possible for staff to perceive them as equitable.

Skinner (1969) reported that behaviors resulting in desirable consequences are likely to recur while those that result in undesirable consequences are less likely to recur. What an organization appears to reward, he pointed out, is the behavior that will be seen as the model for success. Because what is rewarded will be repeated, Skinner advised managers to state which behaviors will be rewarded and which ones will not, and to tie rewards to individual performance. Researchers such as Kreitner (1989) and Winslow (1990) have indicated that Skinner overemphasized the importance of external outcomes such as pay and promotion, ignored the role of internal outcomes such as feelings of accomplishment and recognition, and failed to consider the importance of individual needs, expectations and values.

## Problem Statement

Because employees work harder and perform better if motivated and satisfied with their jobs (Beder, 1990; Cohen, 1990; Schmincke, 1990; Winslow, 1990; Watanabe, 1991), Extension managers need to know what motivates their staff to manage them more effectively (Glassman, 1978; Glueck, 1978). Preventing motivational problems before they begin to lower staff performance and disrupt workers' productivity, minimizes employees' frustration and boosts their working morale (Grossnickle & Thiel, 1988). In Kenya's Rift Valley Province, Extension managers lacked information on factors related to job satisfaction and motivation which they needed to understand why some agents performed better than others with similar qualifications, experience, and abilities. This study was designed to help provide that information.

## Significance of the Study

This study was significant for several reasons. First, public officials need reliable information for accurate decision making and accountability (Altschuld & Thomas, 1991; Green & McClintock, 1991). Second, current information on factors related to agents' motivation in Rift Valley Province was lacking and it was in Kenya's public interest to promote agricultural production and efficiency through Extension (Kenya Government, 1986 & 1990). Furthermore, as times and conditions change, past motivational strategies become ineffective (Buford & Bedeian, 1988). Consequently, identifying agents' needs regularly helps provide meaningful, motivational, staff incentives. Third, modern management practices are shifting managers' emphasis from control to concern for people's creativity, interests and welfare (Steiner, 1973; Caroll, 1989; Rouche et al., 1989; Yukl, 1989; Perry & Wise, 1990; Winslow, 1990; Watanabe, 1991). Lastly, inadequate staff incentives make it harder for many Extension systems, particularly in Africa, to fulfill their responsibilities (Moris, 1987).

## Purpose and Objectives

The primary purpose of this study was to identify job satisfaction factors related to motivation. Specifically, the study sought to: (1) identify the agents' personal characteristics; (2) identify underlying factors of job satisfaction and their relative importance; (3) determine the agents' motivational level; and (4) examine relationships between the independent variables and the dependent variable. On the basis of the study, the researcher suggested and recommended ways to improve agents' motivation and job satisfaction in Kenya's Rift Valley Province, within the available financial, material, and personnel resources and constraints.

## Limitations and Basic Assumptions of the Study

The factors studied were limited to those identified by the researcher from the literature and from personal experience with Kenya's Extension service. Because only agents who were currently working in the Rift Valley Province participated in the study, generalizations were confined to that group.

The researchers assumed that the agents understood the questions and responded frankly. He also assumed that they realized how important their contributions were in helping Extension managers develop effective staff motivational programs, and were willing to share their actual, personal feelings.

## Conceptual Framework

The framework (see Figure 1) used in this study to identify factors related to agents' motivation was based on two content and three process motivation theories. While the content motivation theories of Maslow and Herzberg deal with what motivates people to act in a certain way, the process motivation theories of Vroom, Adams and Skinner are concerned with how people are motivated. The framework was developed by reviewing the five motivation theories, combing similar ideas expressed in each, and then summarizing them. For example, the literature indicated that Maslow's higher-level needs were equivalent to Herzberg's motivators and his lower-level needs were similar to Herzberg's hygienes (Buford & Bedeian, 1988). Based on the literature and personal experience, the researchers grouped the factors thought to be related to motivation into those that operate within the individual's control (internal factors) and those outside a person's control (external factors). Personal characteristics (agents' gender, age, marital status, formal education and years of service) were also studied to determine the extent to which they were related to agents' motivation.

## Methodology

This was a descriptive, correlational research study. A one-shot case study design (Campbell & Stanley, 1963) was chosen to collect data using a group administered, closed-ended, forced-choice questionnaire with 105 job satisfaction, 10 motivational, and 10 personal characteristics items. Prior to administration, the questionnaire, developed by the researcher, was reviewed and its contents found to be valid by nine faculty and two graduate students selected for their background and experience in Agricultural education. A field test indicated that the questionnaire had face validity. Agents' job satisfaction factors and personal characteristics formed independent and extraneous variables respectively. Motivation was the dependent variable. Of the 2,087 agents who formed the frame and accessible population, a random sample of 325 agents, drawn after stratifying by rank (i.e., Agricultural Assistants, Assistant Agricultural Officers and Agricultural Officers) and gender, completed the questionnaire with a response rate of 84.9%. A follow-up of agents who failed to complete the questionnaire as scheduled raised the response rate to 100%. The questionnaire had an

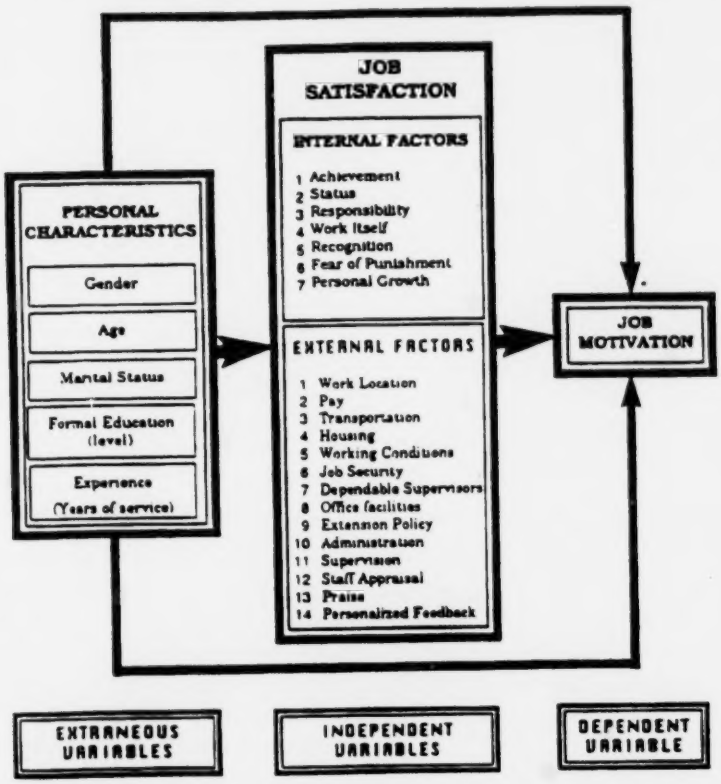



Figure 1. Conceptual framework for identifying factors related to the motivation of Extension agents in Kenya's Rift Valley Province.

eleventh-grade reading level and a reliability of .79 and .81 for the job satisfaction and motivation items, respectively. Data were collected between January and March 1993 and were analyzed at The Ohio State University, using the SPSS statistical package after setting alpha *a priori* at .05 level. Exploratory factor analysis was used to identify factors related to agents' job satisfaction and motivation. Following the administration of the questionnaire, the agents were interviewed as a group in each district. They were asked five questions as follows: Were the questions clear? Was the English understandable? Did the questions cover things that interest Extension staff? Are there things that ought to have been covered that were omitted? Would you say that Extension agents are highly motivated, motivated or not motivated?

## Findings

The findings are related to the four objectives of the study. They are presented in sequential order as follows:

### Objective One

Objective one sought to identify the personal characteristics of the agents which included gender, age, marital status, formal education and years of service. Nearly one in four agents was a female. The agents' mean age was 34.6 years with the youngest and oldest agent being 24 and 55 years, respectively. About 85% of the agents were married, 14.5% were single, 0.3% were divorced and 0.3% were widowed.

The agents' lowest qualification was a post-secondary agricultural certificate while the highest was a master's degree. Agricultural Assistants had served longest, on the average (10.5 years), followed by Assistant Agricultural Officers (8.5 years) and Agricultural Officers (5.2 years). The agents' total years in service ranged from 1 to 33. Nearly 87% of the agents had worked from 1 to 15 years while all Agricultural Officers had 10 years or less of service. Agricultural Assistants had served longest in their current positions (5.5 years). Agents in the other two ranks had, on the average, served for the same length of time (3.9 years) in their current positions. About 41% of the agents had not received any promotion, 50.9% had been promoted once, 6.5 twice, 1.0% three times and 0.3% four times.

### Objective Two

Objective two sought to identify underlying factors of job satisfaction related to motivation and their relative importance for the agents in the Rift Valley Province. To determine the underlying dimensions or factors of the complex phenomena, which in this case was job satisfaction, factor analysis was used as recommended by Gorsuch (1974); Nunnary (1978); Arrindell and van der Ende (1985); Ford, MacCallum, and Tait (1986); Norusis (1990); and Hair, Anderson, Tatham and Black (1992). A maximum likelihood (common factors) factor analysis was conducted since the researchers assumed that the variance of each measured variable could be decomposed into common and unique portions. This approach is appropriate when the measured variances are assumed to be a linear function of the measured (latent) variables (Ford et al., 1986). The maximum likelihood factor analysis was deemed appropriate since the analysis was done on a sample rather than a population (Norusis, 1990).

The number of subjects recommended for conducting factor analysis varied from five to ten per item (Gorsuch, 1974; Nunnary, 1978; and Arrindell & van der End, 1985). Hair et al. (1992) indicated that factor analysis needed at least a sample of 50 but preferably 100 observations. As a general rule, they recommended a conservative figure of 4 or 5 observations per variable but pointed out that in many instances, researchers are forced to factor-analyze a set of variables when only a 2:1 ratio of observations to variables is available. Since no studies had been conducted on the job satisfaction of Kenya's Extension agents, this exploratory research used approximately three subjects per item.

Decision on the number of factors to extract before the unique variance begins to dominate common variance was based on a combination of the Latent Root Criterion (eigen value >1) and the Scree Test Criterion, as recommended by Hair et al. (1992). Using this procedure, eight factors, accounting for 24% of the variance in job satisfaction, were extracted.

Table 1 indicates the items with their factor loadings. According to Hair et al. (1992) factor loadings greater, in absolute value, than .30, .40 and .50 are significant, more significant, and very significant respectively. Ford et al. (1986) indicated that, as a rule, only variables with loadings greater than .40 should be considered significant and used in defining a factor. In this study, only variables with factor loadings of .40 or higher were reported. Because the factors were correlated with one another (see Table 2), the Oblimin rotation with maximum likelihood was used for extraction and to arrive at the factor matrix loadings.

Table 1
ROTATED FACTOR MATRIX LOADINGS ORDER OF 35 JOB SATISFACTION ITEMS ON OBLIQUE FACTORS (N=325)

| Item | Factor Loadings: Factors[a] 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 60 | .50 | | | | | | | |
| 87 | .50 | | | | | | | |
| 33 | .49 | | | | | | | |
| 45 | .47 | | | | | | | |
| 92 | .46 | | | | | | | |
| 61 | .41 | | | | | | | |
| 20 | .41 | | | | | | | |
| 116 | .41 | | | | | | | |
| 43 | | .64 | | | | | | |
| 28 | | .64 | | | | | | |
| 15 | | .50 | | | | | | |
| 30 | | .49 | | | | | | |
| 57 | | .49 | | | | | | |
| 97 | | .44 | | | | | | |
| 16 | | .42 | | | | | | |
| 88 | | | -.46 | | | | | |
| 37 | | | .44 | | | | | |
| 24 | | | | -.57 | | | | |
| 84 | | | | -.54 | | | | |
| 58 | | | | .45 | | | | |
| 46 | | | | | .50 | | | |
| 36 | | | | | .47 | | | |
| 32 | | | | | .47 | | | |
| 59 | | | | | .44 | | | |
| 52 | | | | | .44 | | | |
| 80 | | | | | | .76 | | |
| 82 | | | | | | .68 | | |
| 51 | | | | | | .60 | | |
| 6 | | | | | | .60 | | |
| 76 | | | | | | .45 | | |
| 99 | | | | | | .42 | | |
| 22 | | | | | | | -.55 | |
| 26 | | | | | | | -.41 | |
| 100 | | | | | | | | .47 |
| 96 | | | | | | | | .41 |

[a] Factor names: 1= Evaluation, 2 = Dependable Supervisor, 3 = Work Incentives, 4 = Pay, 5 = Praise & Work Location, 6 = Housing & Transportation, 7 = Job Security, 8 = Administration and Supervision.

Table 2
INTERFACTOR CORRELATIONS FOR THE OBLIQUE ROTATED FACTORS UNDERLYING JOB SATISFACTION OF THE EXTENSION AGENTS IN KENYA'S RIFT VALLEY PROVINCE (N=325)

| Factors | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1 | 1.00 | | | | | | | |
| 2 | .13 | 1.00 | | | | | | |
| 3 | .10 | .12 | 1.00 | | | | | |
| 4 | -.01 | -.18 | -.23 | 1.00 | | | | |
| 5 | .08 | -.08 | .08 | .03 | 1.00 | | | |
| 6 | .29 | - | .07 | .09 | .06 | .16 | 1.00 | |
| 7 | -.19 | -.03 | -.02 | -.02 | -.04 | -.16 | 1.00 | |
| 8 | .05 | -.02 | .09 | .07 | .08 | -.20 | -.004 | 1.00 |

Factor names: 1 = Evaluation, 2 = Dependable Supervisor, 3 = Work Incentives, 4 = Pay, 5 = Praise & Work Location, 6 = Housing & Transportation, 7 = Job Security, 8 = Administration & Supervision.

The name given to each factor by the researcher, assisted by a panel of experts, and the percent the factor explained were as follows: evaluation (7.4%), dependable supervisors (5.3%), work incentives (2.8%), pay (2.2%), praise and work location (1.8%), housing and transportation (1.6%), job security (1.5%) and administration and supervision (1.3%). Table 3 shows means and standard deviations for items with factor loadings of .40 or higher.

## Objective Three

The objective sought to determine the job motivational level of the agents. Table 4 indicates the mean and standard deviation of each variable used to measure motivation. The overall agents' mean motivational-level score was 3.66 on a scale of 1 to 5 where 1 represented the lowest and 5 the highest motivation. Within the ranks, the motivational level was 3.80 for Agricultural Assistants, 3.43 for Assistant Agricultural Officers, and 3.40 for Agricultural Officers. An analysis of variance indicated that the differences in the motivational level of these three groups were statistically significant. The Tukey's HSD (honestly significant difference) post hoc test was applied to determine which groups were different. The findings indicated that Agricultural Assistants were significantly different in their motivational level from Assistant Agricultural Officers and Agricultural Officers but Assistant Agricultural Officers were not significantly different from Agricultural Officers. In terms of gender, an F test revealed no statistically significant difference between the motivational level of males (3.66) and that of females (3.67).

The researcher also conducted group interviews. The agents were asked to describe their motivation in terms of whether they were highly motivated, motivated, or not motivated. In eleven districts, the agents said they were not motivated while in one district they said they were motivated. The district in which the agents described themselves as motivated had a District Agricultural Officer who had a reputation of being an effective and dependable supervisor. The officer had won agents' trust and the praise and admiration of superiors. This particular finding further confirmed the overall findings of the study which indicated that having dependable supervisors was the most important factor related to the motivation of Extension agents in Kenya's Rift Valley Province.

The group interviews also revealed that most agents believed their promotions were more related to years of service than to individual performance. Therefore, they had little motivation to perform well. In recruiting staff for inservice training, agents reported that merit (good work) was often overlooked or not seriously considered. Although other important factors such as one's past academic record, work performance, years since graduation, and home district were considered in selecting an agent for further training, agents suggested that for inservice training to motivate, merit ought to be the most important criterion in the selection process.

Other things that agents said were important for their motivation included adequate and regular payment of travel, subsistence and hotel allowances; and health insurance. Some agents felt that technical staff, irrespective of rank, should receive equal per diem for travel and hotel accommodation. Per diem for rail travel and hotel expenses in Kenya for officers on duty is based on rank. Consequently, it was difficult for low-ranking agents to stay in the same hotels with high-ranking agents even when working on similar assignments because of reimbursement problems. However, other agents viewed per diem based on rank as a good incentive for attracting low-ranking agents to move up through the ranks. This view tended to be held by high-ranking agents while low-ranking agents tended to hold the opposing view.

## Objective Four

Objective four sought to examine the relationships between independent variables and the dependent variable. An examination of intercorrelations among extraneous independent variables revealed very strong association between the agents' age and total years in service (r=.90), and between the agents' rank and formal education (r=.95).

The presence of highly correlated independent variables, indicated that one variable can be explained or predicted by the other. This multicollinearity limits the size of $R^2$ or incorrectly estimates the regression coefficients because of confounding the effects of the independent variables (Hair, et al. 1992).

To control the undesirable effects of multicollinearity, the variable less strongly correlated with the dependent variable in each pair was dropped from further analysis. Thus agents' age was dropped in favor of total years in service while formal education was dropped in favor of the agents' rank on the job.

Dummy coding of categorical variables such as gender, marital status, rank and highest qualification was used before entering these variables into

Table 3
Means and Standard Deviations for Variables Comprising the Eight Job Satisfaction Factors (n=325)

| Item | Abbreviated Variable Label* | Mean | SD |
|---|---|---|---|
| 60 | Being recognized for good work increases my motivation | 4.18 | .82 |
| 87 | Evaluation of my work motivates me to work harder | 4.14 | .77 |
| 33 | Feedback from my supervisor increases my motivation. | 4.21 | .78 |
| 45 | Positive recognition makes me proud to be an agent | 4.42 | .82 |
| 92 | I enjoy meeting my supervisor to discuss my work. | 3.74 | 1.05 |
| 61 | Effective supervisors praise agents for good performance | 3.52 | 1.14 |
| 20 | My supervisor's feedback gives me confidence in my job | 4.35 | .77 |
| 116 | Praise for good performance increases my desire to excel | 4.09 | .89 |
| 43 | My supervisor tends to concentrate more on my mistakes | 3.20 | 1.30 |
| 28 | I get more negative input than help from my supervisor | 3.63 | 1.31 |
| 15 | I frequently receive positive recognition for good work | 2.87 | 1.32 |
| 30 | In Extension most hardworking agents go unrewarded | 1.81 | 1.14 |
| 57 | I am satisfied with most of the current Extension policies | 2.56 | 1.14 |
| 97 | My supervisor makes my work more pleasant | 3.33 | 1.10 |
| 16 | I have a chance to do things for which I am most qualified | 3.28 | 1.39 |
| 88 | I work hard mainly to avoid being disciplined | 2.10 | 1.02 |
| 37 | Evaluating me on work objectives would lower my motivation | 3.83 | 1.01 |
| 24 | I am more motivated by pay than by the work I do | 3.92 | 1.17 |
| 84 | Higher pay is more important to me than job security | 3.94 | .96 |
| 58 | In extension, pay is the most important thing to me | 2.15 | 1.02 |
| 46 | Praise has little influence on my work performance | 3.72 | 1.10 |
| 36 | I deserve little positive recognition for doing my job well | 4.06 | 1.16 |
| 32 | I prefer working far away from my home area | 3.79 | 1.20 |
| 59 | I should be praised less frequently for doing my job well | 3.39 | 1.11 |
| 52 | Being praised makes me feel flattered | 3.69 | 1.00 |
| 80 | Good housing increases my motivation to work | 4.11 | .85 |
| 82 | Housing has little influence on my job satisfaction | 3.96 | .93 |
| 51 | Good housing contributes to favorable work environment | 4.42 | .74 |
| 6 | Good housing contributes to my job satisfaction | 4.26 | .94 |
| 76 | Inadequate transport reduces my job effectiveness | 4.15 | 1.05 |
| 99 | Adequate transport gives me job satisfaction | 4.38 | .79 |
| 22 | I prefer a secure job that pays less than insecure one that pays more | 3.62 | 1.39 |
| 26 | Feeling secure on the job motivates me to work harder. | 4.38 | .82 |
| 100 | Extension administration has little influence on my work performance | 3.83 | 1.00 |
| 96 | Supervision from my boss has little effect on how I work | 3.55 | 1.08 |

*Items 24, , 28, 30, 32, 36, 37, 43, 46, 52, 59, 82, 84, 96, & 100 which were negatively stated were recoded. The items were rated on a scale of 1 to 5 where 1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, 5=Strongly Agree.

Table 4
Agents' Job Motivation Variables and Mean Motivational Level (n=325)

| Item | Variable Label* | Mean | SD |
|---|---|---|---|
| 9 | I often think of leaving the Extension service | 3.76 | 1.27 |
| 38 | Working as an Extension agent is in itself rewarding | 3.79 | 1.07 |
| 42 | I am highly motivated as an agent | 3.27 | 1.38 |
| 64 | I love my job | 4.33 | .74 |
| 102 | My job is frustrating | 3.91 | 1.14 |
| 105 | I wish I had chosen a different career | 4.04 | 1.03 |
| 109 | The hours I spend on the job are the ones I enjoy most | 3.67 | 1.03 |
| 113 | If I were to choose a career once more, I would choose to be an Extension agent | 3.80 | 1.08 |
| 114 | While on vacation, I often wish I were back to work | 2.90 | 1.16 |
| 115 | In the Extension service, I have many opportunities for personal growth | 3.15 | .27 |

Note: * Negative items 9, 102, and 105, were recoded before calculating the variable means and standard deviations (1 represented the lowest and 5 the highest level of motivation).

Mean = 3.66 SD = 0.72 Min = 1.4 Max = 5.0

the regression equation. When simultaneous and stepwise procedures were used to regress motivation on personal characteristics, only agents' rank and years of service were statistically significant ($p < .05$).

The two regression procedures were repeated using the job satisfaction-factor scores plus agents' rank and years of service. The results showed that only rank and five of the eight job satisfaction factors were statistically significant ($p < .05$).

Following McCracken's (1991) recommendation for controlling the effects of extraneous independent variables, the researcher entered the agents' rank on the job into a hierarchical regression equation first to determine the amount of unique variance it contributed. Rank accounted for about 7% of the variance in the agents' motivation. The job satisfaction factors which were statistically significant in the simultaneous and stepwise regression equations were then entered into the hierarchical regression equation (see Table 5) in order of their importance.

After entering all the factor scores into the equation, the final $R^2$ was .55 while adjusted $R^2$ was .54 indicating that the job satisfaction factors contributed an additional 48% of the variance in motivation after accounting for the variance contributed by the agents' rank. However, the final t test values indicated that rank, represented by Dummy3 and Dummy4, was not statistically significant ($p < .05$). When motivation was regressed on the five job satisfaction factors in a stepwise regression equation omitting rank, an $R^2$ of .54 and an adjusted $R^2$ of .53 were obtained.

## Conclusions

On the basis of this study, the researcher made several conclusions, which are related to the objectives of the study and are generalizable to Extension agents in Kenya's Rift Valley Province. They are as follows:

1. Personal characteristics were not as important for the agents' motivation as were the job satisfaction factors.
2. Eight job satisfaction factors were important for the agents' job satisfaction. In decreasing order of their importance, these factors were evaluation, dependable supervisors, work incentives, pay, praise and work location, housing and transportation, job security, and administration and supervision.
3. Only five of the eight job satisfaction factors were important for the agents' motivation. In decreasing order of their importance, these factors were dependable supervisors, pay, job security, evaluation, and administration and supervision.
4. One cause of agents' frustration and low job motivation, according to the group interviews, was their perception that merit was being ignored, or not seriously considered, in selecting candidates for inservice staff training.
5. On the basis of the questionnaire used to measure motivation in this study, the agents' motivational level (3.66) was above the midpoint (2.50) of the motivational scale used in the questionnaire.
6. Over half of the variance in the agents' motivation can be explained by five job satisfaction factors.
7. Job satisfaction and motivation are related but different. This conclusion was illustrated by the fact that eight latent factors were used to explain approximately one fourth of the variation in agents' job satisfaction. However, only five of these factors were used to explain more than one half of the variation in their motivational level.

Table 5
Regression of Agents' Motivation on Agents' Rank and Selected Job Satisfaction Factor Scores - Hierarchical Entry (n=325)

| Factors | $R^2$ | $R^2Ch$ | b | t | p |
|---|---|---|---|---|---|
| Rank: Dummy3 | .068 | .068 | .48 | .38 | .7025 |
| Dummy4 | .068 | .000 | -1.34 | -1.07 | .2876 |
| Dependable Supervisors | .352 | .284 | 3.46 | 10.96 | .0000 |
| Pay | .449 | .097 | -2.55 | -7.86 | .0000 |
| Job Security | .510 | .061 | -1.77 | -5.20 | .0000 |
| Staff Evaluation | .539 | .029 | 1.51 | 4.68 | .0000 |
| Administration and Supervision | .554 | .015 | -1.18 | -3.19 | .0016 |
| Constant | | | 36.67 | | |

Note: Standard error = 4.87, Adjusted $R^2$ = .544, Model F = 52.96, p<.0001

8. Though generalizable only to agents in Kenya's Rift Valley Province, the findings may be useful to Extension managers in other parts of the country, because Kenya's Extension agents have similar basic training and terms of service.

## Implications

Since none of the agents' personal characteristics were significantly related to their motivation, Extension managers could do a better job of improving staff motivation by giving less attention to personal characteristics, and more attention to the job satisfaction factors identified in this study. In 1973, Lawler III reported that in most manufacturing jobs, the best worker produced two to three times as much as the worst worker while in other jobs, differences were even greater. He indicated that in addition to motivation, staff performance was influenced by one's ability and other factors such as mechanical breakdowns and low-quality or inadequate supply of materials. He pointed out that if little ability was required and people had the same ability, skills, and training, positive staff motivation was the most important determinant of effective job performance.

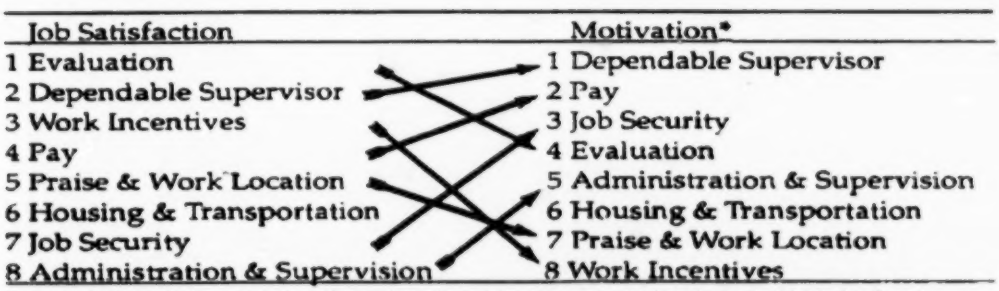
This study has shown that for Extension agents in Kenya's Rift Valley Province, having dependable supervisors was the most important factor related to motivation. Therefore, investing in proper selection and training of Extension supervisors is the most important step in improving staff motivation, performance and productivity. In addition to having dependable supervisors, staff motivation can be increased significantly by tying agents' pay to performance, providing job security, evaluating agents objectively and having an administration and supervision whose primary concerns are staff productivity and welfare. This study has also shown that motivation is positively related to job satisfaction. Therefore, raising agents' motivation also increases their job satisfaction.

The study supports Herzberg's (1959) findings regarding the importance of good relations with one's supervisor, administrative support and good supervision, good pay and job security. However, the study does not support his view that these factors cannot satisfy employees. In this study eight job satisfaction factors contributed 24% of the variance in job satisfaction.

The findings strengthen Vroom's (1964) recommendation that staff performance be assessed accurately; based on standards that employees perceive to be fair, achievable, and equal for all. The study supports his view that the entire incentive system must get administrative backing and attention. The findings also agree with the observation made by Adams and Rosenbaum (1962) that treating employees inequitably will lower their motivation. Finally, the study supports Skinner's (1969) conclusion that identical rewards for all employees are ineffective motivators. To motivate, rewards must be based on individual performance.

In the revised conceptual framework of the study (see Figure 3), the extraneous variables, comprised of personal characteristics, were omitted after the study showed that they were not significantly related to the agents' motivation. Over half of the variance in the motivation of Kenya's Rift Valley Extension agents can be explained by the five job satisfaction factors, which can be manipulated to improve motivation.

The difference between dependable supervisors and supervision (see Figure 2 & 3) might not be obvious but the two factors are different. Dependable supervisors symbolize a good interpersonal relationship between the supervisor and the




* Only factors 1-5 were significantly related to agents' motivation at .05 alpha level.

Figure 2. The relationship between selected job satisfaction factors and agents' motivation in Kenya's Rift Valley Province

agent. Extension supervision, on the other hand, is the process of giving the agents instruction, guidance and discipline which they require to fulfill their duties and responsibilities. Whether, in the agent's view, a supervisor is dependable or not is influenced by how the two individuals interact with each other. However, effective Extension supervision depends on how the supervisor, the agent and the Extension organization interact with one another. Policies and resources that may be beyond the supervisor's control will affect supervision success and effectiveness.

## Recommendations for Extension Managers

Extension managers in Kenya's Rift Valley Province can use the findings of this study to improve staff motivation. The researchers recommends the following:

1. That Extension managers give attention to agents' concerns related to selection procedures for inservice staff training; staff appraisal for purposes of promotion; health insurance; and travel, hotel, and subsistence allowances.
2. That Extension managers take appropriate steps to improve the quality of their Extension supervisors. The researchers suggest that applicants for the positions of Extension supervisors be evaluated thoroughly to ensure that they are professionally qualified and dependable. Those selected should be given regular, on-the-job training in personnel management to provide them with the skills they need to maintain the motivation and job satisfaction of Extension agents. Extension supervisors in administrative positions must be qualified, and be seen to be qualified and competent by their peers and subordinates, to be respected.
3. That Extension managers tie pay to job performance, assure agents of job security, evaluate them objectively using agreed upon criteria, and ensure that the administration and supervision are supportive and sensitive to staff welfare.

## Recommendations for Theory and Future Research

The study has raised several questions which could be answered by further research. The researcher recommends the following:

1. That the study be replicated in other provinces to compare the results from those provinces with the results obtained in Rift Valley Province.

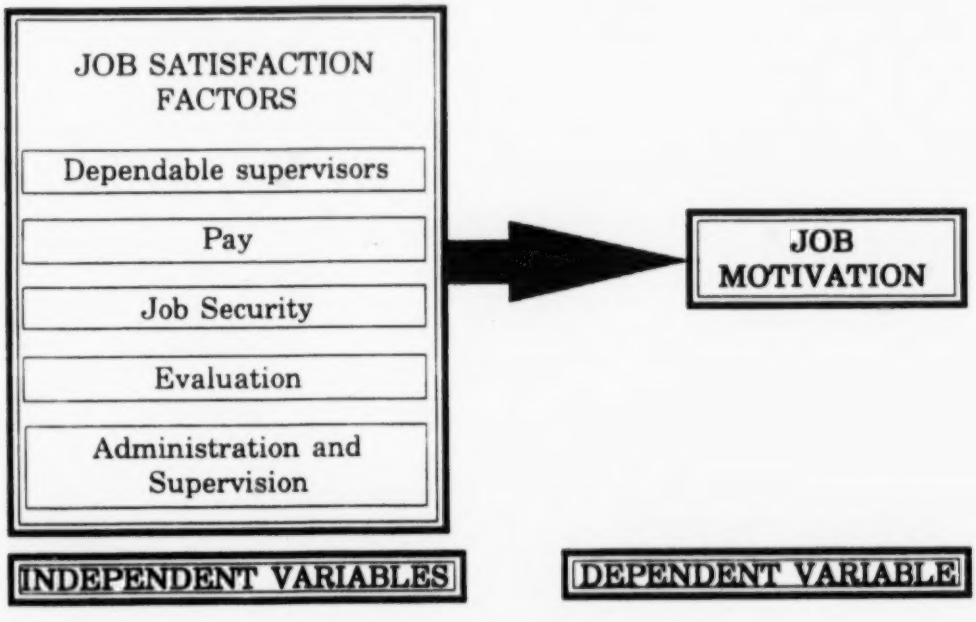



Figure 3. Revised conceptual framework showing the relationship between selected job satisfaction factors and agents motivation in Kenya's Rift Valley Province.

2. That more studies be done in Rift Valley Province to identify other factors that account for the unexplained variance in the agents' motivation and job satisfaction.
3. That at least five items be used for collecting data related to each factor under investigation, and that the ratio of observations to variables be at least five to one, to improve reliability of the results if factor analysis is to be used to identify underlying factors of motivation and job satisfaction.
4. That further studies be done to determine the impact of inservice training and payment of personal allowances and benefits on agents' motivation. As a group, the agents indicated that these issues were of great concern to them.

## References


Adams, J.C., & Rosenbaum, W.B. (1962). The relationship of worker productivity to cognitive dissonance about wage inequities. *Journal of Applied Psychology, 46*(1), 161-164.

Altschuld, J.W., & Thomas, P.M. (1991, Winter). The teaching of evaluation 25 years of growth and change. *Theory Into Practice*. Columbus: The Ohio State University.

Arrindell, W.A., & van der Ende, J. (1985). An empirical test of the utility of the observations-to-variables ratio and component analysis. *Applied Psychological Measurement, 9*, 165-178.

Beder, H. (1990, Summer). Reasons for nonparticipation in adult education. *Adult Education Quarterly, 40*(4), 207-218.

Buford, Jr., J.A., & Bedeian, A.G. (1988). *Management in extension*, (pp. 145-161). Auburn, AL: Auburn University Cooperative Extension Service.

Campbell, D.T. & Stanley, J.C. (1963). Experimental and quasi-experimental designs for research. Reprinted from N. L. Gage (ed.), *Handbook of research on teaching* (pp. 5-71). Chicago: Rand McNally & Co.

Carroll, B.J. (1989, Summer). Employee selection process: Integrating employee needs and employer motivators. *Journal of Studies in Technical Careers, 11*(3), 137-247.

Cohen, D.J. (1990, November). What motivates trainees? *Training and Development Journal*, 91-93.

Davies, B., Ellison, L., Osborne, A., & West-Burnham, J. (1990). *Education management for the 1990s*, (pp. 81-85). Great Britain: Harlow Logman.

Dowling, Jr., W.F., & Sayles, L.R. (1971). *What's wrong with a hierarchy of needs? How managers motivate: The imperatives of supervision*, (pp. 4-13). New York: Mcgraw-Hill Book Company.

Ford, J.K., MacCallum, R.C. & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: A critical review and analysis. *Personnel Psychology, 39*, 291-312.

Glassman, A.M. (1978). *The challenge of management*, (pp. 16-17, 25-27, 209). New York: Wiley and Hamilton Publishing Co.

Glueck, W.F. (1978). *Personnel: A diagnostic approach* (rev. ed., pp. 38-40, 402-408, 564-565, &704). Dallas: Business Publications Inc.

Gorsuch, R.L. (1974). *Factor analysis*. Philadelphia, PA: W. B. Saunders.

Green, J.C., & McClintock. (1991, Winter). The evolution of evaluation methodology. *Theory Into Practice*. Columbus: The Ohio State University.

Grossnickle, D.R., & Thiel, W.B. (1988). *Promoting effective student motivation in schools and classroom: A practitioners perspective*, (pp. 1 & 53). Columbus: The Ohio State University Library microfiche.

Hair, J.F., Jr.,Anderson, R.E., Tatham, R.L. & Black, W.C. (1992). *Multivariate data analysis with readings, (3rd ed.)*. New York: Macmillan Publishing Company.

Heneman, H.G., Schwab, D.P., Fossum, J.A. & Dyer, L.D. (1980). *Personnel/human resource management*. Homewood, IL: R. D. Irwin.

Herzberg, F. (1959). *The motivation to work*, (pp. 1-150). New York: Wiley Company.

Herzberg, F. (1972). *Work and the nature of man*, (pp. 72-76, 92). New York: New American Library.

Kenya Government. (1986). Economic management for renewed growth. *Sessional Paper No. 1*, (pp. 1, 3, 4, 62, 80, & 84. Nairobi: Government Printer.

Kenya Government. (1990). *Central Bureau of Statistics Economic Survey*, (pp. 26-93). Nairobi: Government Printer.

Kreitner, R. (1989). *Management*, (pp. 430-431). Arizona State University. Princeton, NJ: Houghton Mifflin Co.

Lawler III, E.E. (1973). *Motivation in work organizations*, (pp. 1-10). Monterey, CA: Brooks/Cole Publishing Co.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*(4) 370-396.

McCracken, J.D. (1991, December 6). *The use and misuse of correlational and regression analysis in agricultural education research*. Paper presented as the invited address at the National Agricultural

Education Research Meeting, Los Angeles, CA.
Moris, J.R. (1987). Incentives for effective agricultural extension at farmer/agency interface. In Rivera, W. M., & Schram, S. G. edition. *Agricultural extension worldwide*, (pp. 163-171). London, New York: Croom Helm.
Norusis, M.J. (1990). *SPSS/PC + statistics V4.0.* Chicago, IL: SPSS, Inc.
Nunnary, J.C. (1978). *Psychometrics theory (2nd ed.).* New York: McGraw-Hill Book Company.
Perry, J.L., & Wise, L.R. (1990). The motivational basis of public service. *Public Administration Review*, (May/June), 367-373.
Roueche, J.E., Baker III, G., & Rose, R.R. (1989). *Shared vision: Transformational leadership in American community colleges*, (pp.193-196). Columbus, Ohio: The Ohio State University microfiche.
Schmincke, D.R. (1990). Strategic thinking: A perspective for success. *Management Review*, 1092.
Skinner, B.F. (1969). *Contingencies of reinforcement; a theoretical analysis.* New York: Appleton-Century-Crofts.
Steiner, G.A. (1973, July). *The second managerial revolution: Moving toward new management styles.* The Conference Board Record, 28-31.
Vroom, V.H. (1964). *Work and motivation*, (pp. 3-45). New York: John Wiley & Sons, Inc.
Watanabe, S. (1991). The Japanese quality control circle: Why it works. *International Labor Review, 130*(1) 57-79.
Winslow, E.K. (1990). The issue of motivating entre(intra) preneurial behavior. *The Journal of Creative Behavior, 24*(4), 256-262.
Yukl, G.A. (1989). *Leadership in organizations, 2nd ed.*, (pp. 75 & 202). Englewood Cliffs, NJ: Prentice-Hall.

## SUMMARY OF RESEARCH SERIES

Because employees work harder and perform better if motivated and satisfied with their jobs, extension managers need to know what motivates their staff to manage them more effectively. This study reports research conducted in Kenya's Rift Valley Province to identify job satisfaction factors related to motivation of extension agents. It should be of interest to extension managers worldwide.

This summary is based on a dissertation by John G. Mwangi under the direction of N. L. McCaslin. John Mwangi was a graduate student in the Agricultural Education Department at The Ohio State University. He is currently employed by Kenya's Extension Service in The Ministry of Agriculture. Dr. McCaslin is an Associate Professor, Agricultural Education, The Ohio State University. Special appreciation is due to Richard L. Poling, Clemson University; Layle D. Lawrence, West Virginia University; Roger E. Steele, Winrock International; and Keith L. Smith, The Ohio State University for their critical review of this manuscript prior to its publication.

Research has been an important function of the Department of Agricultural Education since it was established in 1917. Research conducted by the Department has generally been in the form of graduate theses, staff studies, and funded research. It is the purpose of this series to make useful knowledge from such research available to practitioners in the profession. Individuals desiring additional information on this topic should examine the references cited.

Wesley E. Budke, Associate Professor
Department of Agricultural Education

SR 76 1994